



Humans in Space *Hakluyt Prize 1998*

<http://library.thinkquest.org/C003763/index.php?page=whyexplr04>

Adrian Hon wrote this letter to various world leaders including the British Prime Minister, the President of the United States of America and the heads of NASA and ESA. This letter was entered into the Mars Society Hakluyt essay writing competition and won first prize in 1998. While it was written two years ago, much of the information and sentiment still holds true.

Dear (insert name),

I am writing to you as a part of the Mars Society Hakluyt contest, in which students have to make the case for initiating a humans to Mars program. Sending humans to Mars could prove to be one of the most important events of the next century; however, it is not a decision made easily. I hope to outline some of the arguments for and against a Mars program in this letter, perhaps in some way helping you to make an informed judgement about the merits of such an endeavour.

“
On a machine, there can only be so many backups and redundancies - not so with humans
”

Firstly, why should we send humans to Mars? Why not send machines instead? The recent Pathfinder mission was remarkably successful, quick and cheap. However, as with all machines, Pathfinder and those which will follow it can only perform certain tasks and have a limited operating lifetime. Humans can carry out a much wider range of experiments and the presence of humans and their problem solving skills would overcome any barriers, as would their ability for instant decision making. Pathfinder, on the other hand, suffered a long communications delay due to the distances involved

between Mars and Earth. On a machine, there can be only so many backups and redundancies. The benefits of humans over machines are justifiably great enough to warrant the extra cost, risk and time. Besides, these are only reasons of practicality. Only humans will be able to accomplish the true utilization of the resources of Mars.

The sight of a man walking on the Moon brought dignity and hope for mankind, a defining moment in our history. In the same way, men walking on Mars would give a tangible symbol of international co-operation and of how far the human race has come. It would also prove to be the starting point of regular manned missions to Mars, leading to the ultimate goal of colonization. The advantages of the colonization of Mars would be many-fold - a new frontier would be created for mankind.

When America was colonized the entire world reaped the benefits from the 'New World'. The cost of the colonization was great, but the new ideas and technology the Americans created far outweighed the expense. The famed 'Yankee ingenuity' was born when the colonists had to change their ways and were under pressure from the untouched land into thinking up new ideas for living and working which changed the world. Colonists of Mars will be faced with new challenges and in true human spirit and ingenuity create new solutions, solutions which could again revolutionize the way we live.

Scientists have remarked that Mars appears to be so suitable for human colonization that it seems to have been put there on purpose. Situated close enough to the sun to receive sufficient light and heat for comparatively trouble free colonization, Mars also possesses huge resources of water in the north polar ice cap and the permafrost. In relative terms, this far outclasses the stores of water recently discovered on the Moon. It would certainly be easier to establish a colony on the Moon due to its proximity, but in the long term, the costs would soar far above those of colonizing Mars. A colony, in order to cut down on transport costs, needs to produce its own food - this is a necessary



Humans in Space *Hakluyt Prize 1998*

<http://library.thinkquest.org/C003763/index.php?page=whyexplr04>

prerequisite. The Moon would not be able to produce its own food, as the elements required by plants for growth are simply not present on the Moon. On Mars, however, colonists would be able to find every essential element and compound they would require present in abundance in the regolith (the Martian 'soil').

“
*A sustained series of
manned missions to Mars
could be the most
important human event for
centuries*

”

Vast leaps in aerospace technology are being made every year, driving prices down for components. We can already see cheaper and faster next-generation space planes on the horizon. The same technology could be adapted to suit the purposes of the humans to Mars mission, technology that exists now, not ten years or twenty years in the future. Using the experience gained during the construction of the International Space Station, and building on the international co-operation that made it possible, the financial burden on each participant could be lessened, allowing countries to take part in what would be perhaps the most important human event for centuries.

With each successive mission to Mars, the costs would grow lower and lower as manufacturing techniques are perfected and components are standardized then mass produced. It is even possible that humans on Mars could mine fuel from the atmosphere and regolith to act as propellant for the journey back to Earth. Using increasingly efficient technology, the costs of such a program to Mars would undoubtedly be large, but certainly not on such a scale comparable to the Apollo missions.

A manned mission to Mars is not some sort of utopian dream, neither for that matter is colonization. Both are entirely possible now.

There will always be significant opposition to any type of space exploration. People argue that we have enough problems on Earth as it is, hardly warranting expenditure on 'useless' trips into space which provide no 'practical' benefits, an argument which was proved true with the 'flag and footprints' vastly expensive Apollo program. Many have not, however, considered the situation if we do not explore and expand. The pressure on us to change and innovate has disappeared - we are becoming bound in our ways while there is no frontier, nowhere to begin anew. We are living in a closed society, and the signs of stagnation are beginning to tell. Over 5 billion humans are alive at this moment, and the number is increasing by 250,000 every day, even against the best of our efforts. In the next century, Earth will be running out of resources and running out of living space. Mars, with its untold quantities of resources and potential to become habitable for humans could a long way to helping the problems of Earth.

The first step to this would be to initiate a humans to Mars program, and the decision can be made now; we could see the first man on Mars less than fifty years after the first man on the Moon. For this decision to be made, leaders of the political and scientific worlds will have to work together towards a common goal, the furthering of mankind. I hope you will appreciate how much this program can mean.

Yours sincerely,

Adrian Hon